

REMARKS

Favorable reconsideration of this application is respectfully requested in view of the foregoing amendments and the following remarks.

At the outset, the undersigned expresses appreciation to Examiner Fischer for his time and attention during the interview that was conducted at the U.S. Patent and Trademark Office on February 7, 2006. The remarks below discuss the substance of the interview.

Attached to this Amendment is a Declaration by the inventor, Mr. Rolf Lasson. As discussed during the interview, Mr. Lasson's Declaration discusses developments leading to the present invention.

The subject matter of this application pertains to a method of producing a packaging material web. Packaging material of the type at issue here typically includes a core web of paper or cardboard, a thermoplastic material and a metal foil. Prior to development of the subject matter disclosed and claimed in this application, packaging material of this type was typically produced by combining the core web, the metal foil and the thermoplastic material, using heat and pressure. The packaging material web is oftentimes stored on a reel and then sent to customers who use the packaging material web to package food stuff.

Using converting equipment, the customers convert the web of packaging material into filled packaging containers. This is accomplished by forming the packaging material web into a tubular shape, filling the tube with foodstuff, transversely sealing the tube at spaced apart locations to form individual container segments, and separating and folding the individual container segments into individual packaging containers of the desired configuration. In the case of

packaging containers for liquid foodstuff, the customer must provide the packaging material with a mechanism for allowing the contents in the container to be dispensed by the consumer. This usually involves forming a through hole, aperture or slit in the web of packaging material before the packaging material is filled, sealed, separated into individual containers and folded into the desired configuration. In addition, to make sure that the liquid food stuff in the packaging container does not contact the exposed edge of the through hole and infiltrate the packaging material, it is also necessary for the customer to apply a covering strip or patch to one side of the packaging material. The resulting opening arrangement can also be outfitted with a pull tab or the like which is joined to the cover strip or patch so that when the consumer pulls the pull tab, an opening exists in the packaging container allowing the foodstuff to be dispensed.

As pointed out in Mr. Lasson's Declaration, this process involves a number of disadvantages and drawbacks. The need for the customer to form the through hole in the packaging material and apply the cover strip or patch to the packaging material reduces the operational efficiency of the conversion process because additional time is required to form the through hole and apply the cover strip or patch. In addition, equipment specifically designed to form the through hole and apply the cover strip or patch is required, and this equipment increases the expense and complexity of the customer's operation. Further, such equipment must be appropriately integrated with the converting equipment.

Upon investigation, the inventor here found that the aforementioned problems could be addressed by implementing a manufacturing method that would allow formation of the through hole in the core web of paper or cardboard before the core

web is joined to other layers forming the packaging material. This would allow, for example, the through hole to be formed at the time the packaging material web is formed, thus doing away with the need for forming the through hole, and possibly also applying the cover strip, during the conversion process.

However, as is also discussed in Mr. Lasson's Declaration, implementing this solution presented other difficulties. For example, it was discovered that when the core web of paper or cardboard is provided with the through hole prior to joining the core web to the metal foil and thermoplastic material, problems arise when the core web is subsequently combined with the other two materials. Upon combining the core web possessing the through hole with the metal foil and the thermoplastic material using known techniques in which the three layers are joined together, the metal foil and thermoplastic material were not joined with sufficient pressure in the area of the through hole. As was discovered, this occurred because in the area of the core web at which is located the through hole, there exists insufficient support to press against and remove air between the metal foil and the thermoplastic material when the three layers (the core web, the metal foil and the thermoplastic material) are combined. Thus, in the area where the through hole is located, the pressure exerted between the metal foil and the thermoplastic material is not sufficient to adequately remove the air in this area. As also explained in Mr. Lasson's Declaration, this entrapped air can create a number of difficulties.

Following further developmental efforts, the inventor discovered that joining together the metal foil and the thermoplastic material before combining those two layers with the core web provided with the through hole reduced the problem of excessive air entrapment between the metal foil and the thermoplastic material. As

the inventor discovered, by joining the metal foil to the thermoplastic material to form a united laminate web and then joining this united laminate web to the core web provided with the through hole, the through hole in the core web does not adversely effect the way in which the metal foil and the thermoplastic material are joined to one another in the same manner discussed above. It was thus possible to apply sufficient pressure throughout the metal foil and the thermoplastic material to help facilitate the removal of air and inhibit the entrapment of excessive air. Once the metal foil and the thermoplastic material are joined to one another to form a united laminate web, the resulting united laminated web is then joined to the core web provided with the through hole.

Thus, as pointed out in Mr. Lasson's Declaration, the invention at issue in this application involves a number of different aspects. In one respect, the invention involves utilization of a core web of paper or cardboard possessing one or more through holes formed prior to joining the core web to the metal foil and the thermoplastic material. This improves the operational efficiency with which the web of packaging material is converted to filled packaging containers because it is no longer necessary for the customer to form through holes in the packaging material web as the packaging material web is converted to filled and sealed packaging containers. Another aspect of the invention involves first joining together the metal foil and the thermoplastic material, followed by combining these two joined layers with the core web provided with the through holes. This operation helps minimize the entrapment of air between the metal foil and the thermoplastic material, while nevertheless allowing the various layers to be joined in a manner necessary for producing the packaging material web.

By way of this Amendment, previously pending Claims 1-16 have been cancelled. In addition, new independent Claim 17 is presented. This new claim was discussed during the interview. Claim 17 defines a method for producing a packaging material web that comprises conveying a thermoplastic layer toward a nip between a first pair of rollers, conveying a metal foil towards the nip between the first pair of rollers, passing the thermoplastic layer and the metal foil concurrently through the nip between the first pair of rollers to compress the thermoplastic layer and the metal foil together while applying heat sufficient to adhere the thermoplastic layer to the metal foil to produce a united laminate web, conveying the united laminate web toward a nip between a second pair of rollers, conveying a core web of paper or cardboard provided with at least one through hole toward the nip between the second pair of rollers, and extruding a thermoplastic adhesive between the united laminate web and the core web. The united laminate web and the core web pass through the nip between the second pair of rollers with the thermoplastic adhesive between the core web and the united laminate web to join together the united laminate web and the core web and produce a packaging material web in which the at least one through hole in the core web is covered by the united laminate web and the metal foil of the united laminate web faces a first side of the core web.

As discussed during the interview, the documents relied upon in the most recent Official Action do not disclose or suggest this claimed method. In one respect, none of the cited documents discloses joining together a core web of paper or cardboard provided with at least one through hole, a thermoplastic layer and a metal foil. The documents relied upon in the Official Action fail to recognize the shortcomings recognized by the inventor here -- namely that joining together a metal

foil, a thermoplastic layer and a core web of paper or cardboard, and then later forming a through hole in the three joined layers, can reduce the operational efficiencies associated with converting the packaging material web into a filled packaging container. Because the applied documents are not at all concerned with addressing such shortcomings, it is understandable that the documents lack disclosure of implementing a method as recited in Claim 17 that involves joining together a core web of paper or cardboard already provided with at least one through, a thermoplastic layer and a metal foil.

In fact, as pointed out during the interview, it is significant to note that none of the applied documents discloses, or is at all concerned with, a method for producing a packaging material web provided with at least one through hole. For example, the primary reference relied upon in the Official Action, U.S. Patent No. 4,387,126 to *Rebholz*, discloses a laminated packaging material suitable for packaging products (e.g., povidone iodine, personal care items and drugs) in pouch form. There is no disclosure in this document that the disclosed packaging material is or should be provided with a through hole.

The Official Action states that it would have been obvious to provide the packaging material disclosed in *Rebholz* with a through hole in light of the discussion in the background portion of the present application. However, there exists no reason why one of ordinary skill in the art would have been motivated to provide the packaging material disclosed in *Rebholz* with at least one through hole. The packaging material web at issue in this application includes a through hole because the packaging material web has useful application in the production of packaging containers containing foodstuffs such as liquids and the like. On the other hand, the

packaging material disclosed in *Rebholz* is used to produce pouches that do not require a through hole.

In addition, even if one were somehow motivated to utilize the description of other known packaging containers as described in the background portion of the present application to include a through hole in the *Rebholz* packaging material, one would do so by providing the through hole after joining together the various layers forming the packaging material because that is what is discussed in the background portion of the present application. That is, the background portion of the present application does not describe that it was known to provide a core web of paper or cardboard with at least one through hole prior to joining the core web to a thermoplastic layer and a metal foil.

Moreover, none of the documents relied upon in the Official Action discloses potential problems created when joining together a core web provided with a through hole, a metal foil and a thermoplastic layer. Thus, it cannot be said that the applied documents would have led one of ordinary skill in the art to utilize a method for producing a packaging material web that addresses such problems by joining together a thermoplastic layer and a metal foil to produce a united laminate web, and then joining that united laminate web with a core web already provided with a through hole.

For at least the reasons set forth above, it is respectfully submitted that the method recited in independent Claim 17, as well as dependent Claims 18-27, is patentably distinguishable over the disclosures contained in the applied documents.

New independent Claim 28 is similar to independent Claim 17, except that Claim 28 recites additional aspects pertaining to the subsequent use of the

packaging material web. It is respectfully submitted that the method recited in independent Claim 28, as well as dependent Claims 29-36, is also patentably distinguishable over the disclosures in the applied documents for reasons similar to those discussed above.

Early and favorable action with respect to this application is respectfully requested.

Should any questions arise in connection with the application or should the Examiner believe that a telephone conference with the undersigned would be helpful in resolving any remaining issues pertaining to this application, the undersigned respectfully requests that he be contacted at the number indicated below.

Respectfully submitted,

BUCHANAN INGERSOLL PC

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